

Application No.: 10/603,952

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A vascular prosthesis, comprising a generally tubular portion and an end formation configured for surgical connection to an opening formed in a blood vessel, said tubular portion including a generally uniform surface and a first diameter that tapers to a smaller second diameter adjacent decreased diameter portion prior to commencement of said end formation having an opening larger than the tubular portion, said end formation defining an enlarged chamber with a non-circular open end perimeter outlining a cross-sectional area larger than a cross-sectional area of the tubular portion at the first diameter.

2. (previously presented) The vascular prosthesis according to claim 1, wherein said enlarged chamber comprises a first diameter parallel to the axis of the tube and a second diameter transverse to the axis of the tube, wherein said first diameter is longer than said second diameter, said first diameter comprising a heel and a toe, wherein a transition between said tube and said toe is outwardly initially convex before a final concave portion.

3. (original) The vascular prosthesis according to claim 1, wherein said enlarged chamber is configured to promote localized movement of blood having a non-laminar nature with a shear stress inducing relationship to a wall of said blood vessel.

4. (original) The vascular prosthesis according to claim 2, wherein a transition between said tube and said heel is generally outwardly concave.

5. (original) The vascular prosthesis according to claim 2, wherein opposing sides of said second diameter are generally outwardly convex.

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6. (original) The vascular prosthesis according to claim 2, wherein said first diameter is between approximately 14 and 36 mm and said second diameter is no greater than approximately 14 mm.

7. (previously presented) The vascular prosthesis according to claim 1, further comprising a second end formation.

8. (previously presented) The vascular prosthesis according to claim 7, wherein said second end formation comprises a second enlarged chamber comprising a first diameter parallel to the axis of the tube and a second diameter transverse to the axis of the tube, wherein said first diameter is longer than said second diameter, said first diameter comprising a heel and a toe, wherein a transition between said tube and said toe is outwardly initially convex before a final concave portion.

9. (original) The vascular prosthesis according to claim 8, wherein a transition between said tube and said heel of said second enlarged chamber is generally outwardly concave.

10. (original) The vascular prosthesis according to claim 8, wherein opposing sides of said second diameter of said second enlarged chamber are generally outwardly convex.

11. (currently amended) The vascular prosthesis according to claim 8, further comprising a ~~second~~ decreased diameter portion ~~prior to commencement of~~ adjacent said second end formation.

12. (canceled).

13. (canceled).

14. (previously presented) The vascular prosthesis according to claim 1, wherein the tubular portion and end formation are comprised of a material other than autologous vascular tissue.

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15. (previously presented) The vascular prosthesis according to claim 1, wherein the tubular portion and end formation are comprised of a polytetrafluoroethylene material.

16. (previously presented) The vascular prosthesis according to claim 7, wherein the tubular portion, end formation and second end formation are comprised of a material other than autologous vascular tissue.

17. (previously presented) The vascular prosthesis according to claim 7, wherein the tubular portion, end formation and second end formation are comprised of a polytetrafluoroethylene material.

18. (currently amended) A vascular prosthesis, comprising a tube and an enlargement positioned at a distal end of the tube, the tube comprising a first diameter portion extending along a majority of the length of the tube and a second diameter portion positioned adjacent the enlargement, the first diameter portion having a diameter greater than a diameter of the second diameter portion, the enlargement defining an enlarged chamber with a non-circular open end perimeter outlining a cross-sectional area larger than a cross-sectional area of the first diameter portion.

19. (currently amended) The vascular prosthesis according to claim 18, wherein the enlargement includes an open end perimeter has having a generally oval shape cross-section.

20. (previously presented) The vascular prosthesis according to claim 18, wherein the tubular portion and enlargement are comprised of a polytetrafluoroethylene material.

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21. (currently amended) A vascular prosthesis, comprising a tube, a first enlargement positioned at a distal end of the tube and a second enlargement positioned at a proximal end of the tube, the tube comprising a first diameter portion extending along a majority of the length of the tube, a second diameter portion ~~smaller~~ with a diameter less than a diameter of the first diameter portion positioned adjacent the first enlargement and a third diameter portion ~~smaller~~ with a diameter less than a diameter of the first diameter portion positioned adjacent the second enlargement, at least one of the first and second enlargements defining an enlarged chamber with a non-circular open end perimeter outlining a cross-sectional area larger than a cross-sectional area of the first diameter portion.

22. (previously presented) The vascular prosthesis according to claim 21, wherein the tubular portion, first enlargement and second enlargement are comprised of a polytetrafluoroethylene material.

23. (currently amended) A vascular prosthesis, comprising a continuous expanded polytetrafluoroethylene structure with a generally uniform surface, the structure comprising a tubular part and an enlargement at a distal end of the tubular part, the enlargement defining an enlarged chamber including an open distal end with a diameter larger than a diameter of the tubular part.

24. (previously presented) The vascular prosthesis according to claim 23, wherein the tubular part comprises a first diameter portion extending along a majority of its length and a second diameter portion positioned adjacent the enlargement, wherein a diameter of the first diameter portion is greater than a diameter of the second diameter portion.

25. (canceled).

26. (canceled).

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